Grand Canyon

National Park Service
U.S. Department of the Interior

Grand Canyon National Park

November 2016 High-Flow Experimental (HFE) Release

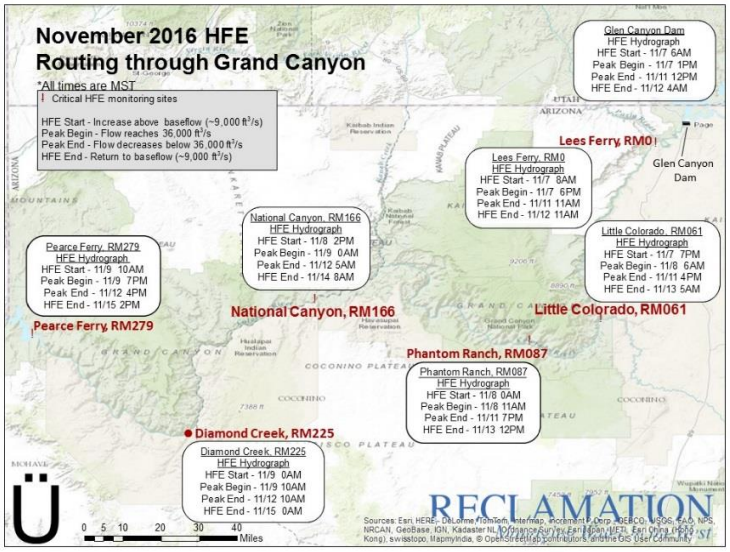
On November 7, 2016 the Department of Interior will begin increasing the release from Glen Canyon Dam for a high-flow experimental (HFE) release of approximately 36,000 cubic feet per second (cfs) for 96 hours. The goal of the high-flow experiment is to move sand stored in the river channel and redeposit it to rebuild eroded sandbars and beaches in Grand Canyon National Park. This release follows the science-based Protocol for High-Flow Experimental Releases from Glen Canyon Dam established in May 2012 and is a component of the Department's compliance with the Grand Canyon Protection Act of 1992. The Grand Canyon Protection Act mandates that Glen Canyon Dam be operated in a manner that protects, mitigates adverse impacts to, and improves the values for which Grand Canyon National Park was established.

Flow Regimes

Since 1996, releases from Glen Canyon Dam have ranged from 8,000 to 25,000 cfs. The increase in flow to approximately 36,000 cfs will change conditions on the Colorado River. Research has shown that some normally difficult rapids decrease in their technical difficulty, whereas other rapids become more technically challenging at higher flows. There are inherent risks associated with recreational activities along the Colorado River corridor through Grand Canyon at all times.

On Monday, November 7 at 6 am, the flow from the dam will increase from approximately 9,000 cfs until it reaches the maximum release of approximately 36,000 cfs at 1 pm November 7. The peak release will be held for 96 hours. Flows will begin to ramp down at 12 pm November 11 until a base release of approximately 9,000 cfs is reached at 4 am on November 12. The total duration of the experiment from beginning to end will be approximately five days.

Flow Information



Because of the distances downstream of the dam, increasing flows will reach downstream locations at different times. Flows will arrive at Phantom Ranch (River Mile 87) about 20 hours after release from Glen Canyon Dam, and almost 54 hours after release at Pearce Ferry (River Mile 279). Specific information about flow levels at varying locations within Grand Canyon will be posted before and during the high-flow experiment at Lees Ferry, Phantom Ranch and the Backcountry Information Center.

Camp on Durable Surfaces

Because the river will carry a greater volume of water than usual, the HFE will also change the size and availability of campsites along the Colorado River. Most campsites will be smaller, and some particularly low-lying campsites may not be usable. The Grand Canyon Monitoring and Research Center has maps of campsites showing modeled shorelines at 45,000 cfs available online at http://www.gcmrc.gov/gis/silvermap1.aspx.

The area available for camping will be smaller at most sites, and river users and backpackers may have to set up tents closer to one another than during typical flows. It is important to follow Leave No Trace principles and travel and camp on durable surfaces during the HFE. Durable surfaces include bare sand above the high flow line, sites where people have previously camped and established trails.

River users and backpackers are encouraged to communicate with each other and with river rangers about available campsites to protect the canyon's resources and to ensure a quality experience for everyone in the river corridor during the high flow and for those who follow.

Camps should not be established in the pre-dam old high-water zone, marked by mesquite, catclaw acacia, and netleaf hackberry on rounded sandy slopes or higher sand terraces. The old high-water zone is especially fragile because it no longer receives moisture, sand or nutrients from natural annual floods that reached over 100,000 cfs and is not replenished by experimental high flows. Damage to root systems from soil compaction and erosion and to biological soil crusts by camping or social trails may be irreversible due to the extremely fragile nature of the old high-water zone.

Information

www.nps.gov/grca/naturescience/hfe.htm
www.usbr.gov/uc/water/crsp/cs/gcd.html
www.gcmrc.gov